CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

REGIONALIZATION OF THE STATE WATER RESOURCES CONTROL BOARD STRATEGIC PLAN

Revised July 2005

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A. EXECUTIVE SUMMARY

Strategic planning is essential to accomplishing the mission of the Regional Board (RB). In 2001, the SWRCB issued a "Strategic Plan: A Vision for the Future." The purpose of this plan is to "highlight those new priorities that need to be addressed over the next five years." The 2001 plan was a result of the state's continuing strategic planning process.

Using the framework of the 2001 Strategic Plan, the Chairman of the San Diego Regional Water Quality Control Board (John H. Minan) and the Executive Officer (John Robertus) developed a strategic assessment of the water quality priorities and programs in Region Nine. The report, entitled "The Regionalization of the SWRCB Strategic Plan," was published in October 2003 and is updated in this report. It provides a regional, strategic water quality perspective by identifying the dominant challenges that Region Nine faces until the next revision of the SWRCB Strategic Plan. It is intended to aid current and future RB members and staff and to assist the public in better understanding regional priorities and intended directions. To assist the reader, commonly used acronyms are listed in appendix A.

B. SAN DIEGO REGIONAL BOARD

1. REGIONAL BOARD MISSION

The mission of the RB is to preserve and enhance the quality of California's water resources and to ensure their proper allocation and efficient use for the benefit of present and future generations.

2. AUTHORITY AND GOVERNING PRINCIPLES

The RB is organized under Sec.13100 of the Water Code and conducts its activities with the SWRCB within CALEPA. The RB has independent authority to act under state law, principally the Porter-Cologne Act (California Water Coder Sec. 1300 et seq.) It implements the Federal CWA, general programs, including the National Pollution Discharge Elimination System (NPDES) point source program, the pretreatment program applicable to indirect dischargers, the non-point source (NPS) program, the dredge and fill program, administered by the U.S. Army Corps of Engineers, and the oil spill program.

The U. S. Environmental Protection Agency (USEPA) is authorized by the CWA to delegate NPDES permit responsibilities to a state provided that the state has an approved program. California is authorized to implement and administer the CWA. Whenever a federal agency is the issuing authority for a license or permit (including a NPDES permit), section 401 requires that the state "certify" that any resulting discharge into navigable waters will comply with the effluent and water quality standards of the CWA. No federal license or permit may be granted without the requisite 401 certification. Most 401 Certifications have been delegated by the RB to the Executive Officer.

The RB has and will continue to utilize a regulatory strategy focused on the control and reduction of point source pollutants. There is increasing effort to regulate NPS pollution

sources as well. Regulating NPS pollutant discharges by reducing or eliminating them at their source is a growing challenge. This requires the identification and regulation of many responsible NPS dischargers. This effort requires extensive public participation and education. The RB has seen a dramatic increase in complaints and concern about ambient water quality conditions. Historically, most regional water quality monitoring has been dedicated to ensure discharger compliance. With funding now available for the Surface Water Ambient Monitoring Program (SWAMP) and the Groundwater Ambient Monitoring and Assessment (GAMA) Program, this is beginning to change. We expect to pursue resources to fund these programs in the future and will likely require additional monitoring of receiving waters by dischargers.

The RB encourages full participation of the public. This public process affords full access to activities and deliberations by the Board and access to all information possessed by the Board, except as limited by law. The RB also strives to meet environmental justice considerations required by law.

3. RESOURCES

i. FUNDING

The funding available to the RB determines our overall capability to respond to water quality issues in the region but has no direct role in the budget process. The SWRCB allocates funds among Water Board organizations based on legislative mandates, statewide priorities and region specific issues. The RB role in the budget process is to make resource needs known to SWRCB management and to utilize available resources effectively and efficiently. The state's ongoing budget constraints impact funding which comes from fees, federal allocations from the CWA and Department of Defense sources, state issued bonds and the state General Fund.

The Region is also presented with significant resources from statewide bond act propositions, federal clean water programs, loan programs, and enforcement orders with which to address water quality problems. In the San Diego region, there are currently 42 grant-funded projects worth approximately 58 million dollars managed through contracts administrated by staff of the Grants and Projects Assistance Unit. Watershed planning, implementation of urban runoff BMPs or NPS Management Measures, exotic invasive plant removal, stream restoration, and public education are the major categories of grant-funded projects.

Our Regional Board total budget for FY 2004-05 is $7,797,077, which includes $429,706 in contract funds. It is comprised of 42.0 % fees, 17.3 % federal sources, 4.8% bond issues, 14.5% General Fund and 21.4% other sources. Over the past four years our budget support has shifted significantly from General Fund to fees, which may reduce the threat of future budget cuts.

ii. EMPLOYEES

Our greatest resource is our highly qualified and respected staff and Board Members. The San Diego RB currently has about 65 full-time equivalent employees. The most recent Needs Assessment to address our core regulatory workload requires about 130 employees. The staff is more experienced, trained and capable than at any time in our past. State law establishes a nine person Board. For the first time in a number of years we have nine Board Members serving. The Regional Board has dedicated legal counsel by an attorney in Sacramento and visiting the Regional Board office about four or five days a month including RB Meetings.

iii. FACILITIES

The RB facilities should continue to be adequate for the foreseeable future. The RB is now housing about ten employees of the state Department of Toxic Substances Control and two staff members of the San Diego River Conservancy. We are temporarily providing a workspace for the staff legal counsel for the Colorado River RB. The public meeting room for RB meetings and multiple smaller rooms for public and staff meetings is excellent. With the exception of not having a videoconference capable room, our internal and external electronic communications system is excellent. Vehicles, field equipment and our boat and trailer are stored on-site.

iv. INFORMATION MANAGEMENT

Our information management system consists of a largely standardized set of components for data communications, workstations, and database and records management. We have approximately 23,000 file records, mostly in paper form, covering virtually all of our key regulatory activities in over 40 subject areas spanning the last 50 years. Many older records are in archive form in Sacramento.

We receive enormous quantities of data on waste discharges, surface and ground water quality and other events. Most of this data is in paper form in many thousands of files or on disparate databases such as Geotracker, the System for Water Information Management (SWIM) and the California Integrated Water Quality System (CIWQS). While we possess a great amount of data, relatively little information is economically available due to the extensive reliance on paper records. Access to information for analytical, reporting and review purposes is labor intensive. Accordingly, efficient access to files and records is difficult for dischargers and the public.

We are addressing these deficiencies in a number of areas. The CIWQS Project to be implemented in June 2005 will integrate the functionality of the SWIM, Geographical Water Body System (GeoWBS), and Electronic Self Monitoring Report applications. This will automate a number of existing manual processes, eliminate duplication and provide a key step toward utilizing Geographic Information System (GIS) methods to accomplish our mission and to meet our obligations to the public.

We have also secured funding for the purchase of an automated document imaging system that will scan, digitize, compress, store, retrieve, and manage documents from our file records so that they can be retrieved on existing PC workstations. Organization of our

files and data in paper form significantly limits our ability to gather, integrate and analyze decision critical information in a timely manner. We can greatly improve our oversight and analysis of historic and on-going discharges of waste after we begin scanning our paper file records into this system starting in FY 2004-05.

4. REGIONAL WATER QUALITY OVERVIEW

The Water Quality Control Plan (Basin Plan) is the key regulatory standard for ground and surface waters of the region. The Basin Plan is a dynamic document and is the RB "blueprint" for water quality management. Keeping the Basin Plan current is critical. Due to limited resources, we have been unable to keep our Basin Plan up-to-date. The Triennial Review in September 2004 confirmed several years of backlogged basin planning work. Although the immediate future looks viable for our TMDL program, our basin planning requirements likely will not be satisfied for the foreseeable future.

The RB provides regulatory oversight for the area extending from Laguna Beach in Orange County to the Mexican Border, extending inland to include Murrieta and Temecula in Riverside County and including much of San Diego County from the coast to the inland mountain ridgeline. This arid coastal region has an annual rainfall that varies from nine inches in the south to over twenty inches near Mt. Palomar. The region is densely populated with most of the 3.8 million inhabitants living within a few miles of the coastline. The region has a major Navy and Marine Corps military presence. Large bases are located at Camp Pendleton, MCAS Miramar and on San Diego Bay. Agriculture from irrigated fields, groves, orchards and commercial scale nurseries has been historically important. The fishing, industrial and tourism activities are concentrated in the San Diego Bay area. A significant water quality problem has existed in the Tijuana River valley and estuary as a result of inadequate treatment of sewage from Tijuana, Mexico. This problem persists today, despite extensive efforts by both countries to convey and treat Mexican sewage. The RB currently regulates the International Boundary and Water Commission Wastewater Treatment Plant (IWTP) and South Bay Ocean Outfall discharge with a NPDES permit.

The water quality of drinking water is an important concern. The San Diego Region has sufficient natural fresh water supply for only about 50,000 people. Most potable water is imported from the Colorado River or Northern California. The use of local ground water is the only source in some parts of the region and protecting all active or potential hydrologic basins is a growing concern. The Basin Plan reflects that water contact recreation at beaches and streams is another important beneficial use. Over 80 miles of ocean beaches frequented by surfers, swimmers and beach-goers, and several bays and estuaries in 11 watersheds have been significantly impacted by NPS discharges from development. The thousands of discharge sources from the residential, recreational, industrial, military, agricultural and municipal activities have resulted in pollutant loads that exceed the assimilative capacity of some water quality segments. This condition has resulted in those waters being listed as "impaired" in accordance with Section 303(d) of the CWA. The Regional Board anticipates conducting a TMDL process that will allocate a pollutant load to all dischargers that impact those waters.

C. IMPORTANT ISSUES AND STRATEGIES

The following list does not reflect an order of priority.

1. TOTAL MAXIMUM DAILY LOAD (TMDL) PROGRAM
We have a significant challenge to continue our progress in developing and presenting for Regional Board adoption new TMDLs, load reductions, and associated implementation plans to restore beneficial uses in impaired water bodies and to implement those already adopted.

The 2002 Clean Water Act Section 303(d) List of Water Quality Limited Segments has approximately 129 water body and pollutant combinations. We are actively working on 16 projects that address 69 of these water body and pollutant combinations. Bacterial contamination is the greatest cause of impairment, accounting for approximately 29 percent of the total number of water quality limited segments. The next largest impairment categories are sediment toxicity and degraded benthic communities (14 percent) and metals (12 percent). The total time to complete a TMDL depends on the nature of the pollutant, the characteristics of the water body, and the amount of stakeholder participation.

The precursor of the TMDL is the continuous oversight and biennial reporting of the condition of ambient waters [CWA section 305(b)] and the list of water quality limited segments [CWA section 303(d)]. Although this process has been accomplished routinely in the past, the 2002 update was difficult. The SWRCB adopted the proposed list in February 2003 and the USEPA granted final approval in June 2003. To make the current listing process more efficient and less contentious, the SWRCB adopted in September 2004 a policy for listing water and delisting water bodies, and is preparing recommendations of water body and pollutant combinations for the next version of the list.

TMDL Strategy:

a. Group similar impairment TMDL efforts, such as bacteria, together to address multiple Section 303(d) listings in a single project and continuously improve stakeholder involvement.

b. Use legal authority to require monitoring of receiving waters by dischargers to better define pollution reduction, impacts and assimilation.

c. Carefully review TMDL efforts statewide and refine internal processes to transition from the TMDL development to the TMDL implementation to accomplish the waste load reductions.

d. Seek opportunities to remove causes of water quality impairment other than by using the TMDL program.

2. STORM WATER RUNOFF PROGRAM

Storm water related discharges are regulated by either municipal separate storm sewer systems (MS4) permits or by industrial storm water permits. An industrial storm water permit regulates construction sites. The developed portions of the coastal areas of Orange, Riverside and San Diego Counties have highly developed municipal separate storm sewer systems that collect, convey and discharge urban runoff without treatment for removal of pollutants, which are then discharged to receiving waters. This NPS waste load is currently the greatest single source of pollution in the Region and it is regulated by the Municipal Storm Water NPDES permits.

Regional ocean beaches, San Diego Bay, Mission Bay and the Tijuana River Estuary have been significantly impacted by urban runoff pollutant discharges. The water quality impacts from bacteria pollution at all swimming and surfing beaches is critical to both tourism and for use by local residents. Other pollutants discharged, such as trash, sediments, chemicals and metals, significantly impact waters throughout the Region.

There are currently three Phase I MS4 permits that require each copermittee to establish capabilities to manage its municipal storm water systems to reduce pollutants to the "maximum extent practicable". Copermittees will progressively implement jurisdiction and watershed based runoff management plans and use Standard Urban Storm Water Mitigation Plans for "significant development" and "redevelopment". Current MS4 permits require coordinated oversight of construction and industrial sites that discharge to the systems. Specific industrial and construction sites also require state general storm water permits.

With the exception of our regional military installations, the impact of the Phase II storm water permits will not likely contribute significantly to the near term improvement of water quality. The military installations will likely assume the Phase II permits. The increasing number of Phase II construction sites having one or more acres will require significantly more oversight effort by the SWRCB, our Regional Board and the copermittees. In the Industrial storm water program, we anticipate a slight reduction in the number of non-filer industrial dischargers. However, the Phase I and II industrial storm water program continues to lack resources for adequate implementation.

Storm Water Program Strategy:

a. Rigorous oversight of Phase I MS4 permits. In the next five years, assure both Phase I and II copermittees effectively implement municipal storm water programs.

b. Move toward the use and implementation of a watershed-based system of storm water permitting.

c. Consolidation of the Phase II requirements for industrial and construction site storm water oversight into the municipal storm water program.

3. LOSS OF BENEFICIAL USES OF WATERS AND WETLANDS FROM URBANIZATION

The Region has a unique ecosystem with an unusually high number of endangered and threatened species of flora and fauna. Over 90% of the native coastal wetlands have been filled in for urban and industrial development. Protecting the beneficial uses of waters in the remaining coastal lagoons, streams and wetlands is an important challenge. The watercourses in the eleven major watersheds in the region have had significant hydro-modification of portions of the bays, creeks, streams and rivers to "improve" them for the purpose of optimizing their suitability as conduits for storm water and urban runoff. In some locations, dams have been constructed to store or divert water.

These improvements have significantly degraded the habitat value and water quality of these waters. This process will continue as long as development is causing land use changes that alter natural runoff and increase pollutant loads into regional waters. There is an increasing reliance on water quality planning and mitigation to provide protection from such impacts. The process to obtain CWA Section 404 and 401 Water Quality Certifications offers an opportunity to review projects and use mitigation or Waste Discharge Requirements to compensate for and monitor impacts to beneficial use. Without a funding mechanism, the Regional Board has not been able to participate in a program established by the Army Corps of Engineers for the development of Special Area Management Plans (SAMP). These plans facilitate a comprehensive joint planning effort by federal, state and local agencies to protect, restore and enhance aquatic resources while accommodating development activities.

Water quality mitigation and protection requires extensive intergovernmental coordination to scrutinize proposed and on-going development projects. There are currently about 1,000 active projects over five acres in size in the region and trends indicate continued development at this rate. The use of California Environmental Quality Act (CEQA) reports and other studies that pertain to sites of concern is hampered by the lack of a useful system to store, retrieve and process critical information for sites. We are also unable to keep track of the fate of mitigation projects to see if they produce expected benefits. We would be well served to review projects in the early stages of development and actively participate in the CEQA document review. This would ensure that water quality concerns were addressed prior to project approval. Currently, there are not sufficient resources for us to participate in early project development.

Development has resulted in many ephemeral streams now flowing year round, altering the stream's aquatic and riparian ecology. Another major impact from development is unnatural sediment loads caused by construction grading practices, wild land fires and agricultural activities. Coastal beaches are experiencing a shortage of beach sand deposition due to obstructions that limit the migration of sediment to the beaches. Invasive species of flora such as arundo donax (giant reed) found in rivers and streams and caulerpa taxifolia, or "killer algae" found in Agua Hedionda Lagoon, continue to threaten beneficial uses. No known significant invasive fauna problems exist.

Strategy for Protecting Regional Waters and Wetlands:

a. Selectively use limited resources for assessment of CEQA documents to identify potential water quality impacts and determine the adequacy of proposed mitigation measures.

b. Use enforcement actions to correct deficiencies identified through the 401 mitigation site assessment project conducted with a USEPA grant.

c. Seek increased funding from fees we collect for 401 applications, student contract funds, and sources appropriate for regional planning and SAMP participation.

d. Improve our capabilities to track Section 401 Water Quality Certifications.

4. MARINE SEDIMENT CONTAMINATION AND REMEDIATION

The RB is currently focused on water quality impacts resulting from legacy deposits of pollutants in marine sediments in San Diego Bay. These sediments are referred to as "contaminated marine sediments" on the bottom of marine waters. They contain chemical substances at concentrations that pose a known or suspected environmental or human health threat.

During the early-1980s public interest in water quality conditions of San Diego Bay increased. In response, the RB began an investigation focusing on chemical sources, fates and effects and directed the sampling for the State Mussel Watch program and augmented this effort with significant staff effort to collect sediment samples at more than 300 sites throughout the Bay. The Board identified 13 major areas with sediments contaminated with chemicals, and investigations have subsequently identified the sources or potential sources of the contamination at most of these sites. In addressing the contaminated sediment sites the RB has been pursuing a strategy of identifying any ongoing sources of contaminants impacting each site, initiating regulatory actions to terminate or control discharges where appropriate and pursuing cleanup or remediation. Key steps in the cleanup or remediation phase include requiring identified responsible parties to delineate the horizontal and vertical extent of the contamination, establishing cleanup levels and directing cleanup and post-cleanup verification monitoring.

The process of establishing cleanup levels has been controversial, with environmental organizations pushing for stringent cleanup levels and responsible parties trying to keep the costs of cleanup or remediation as low as possible. Seven contaminated sites have been addressed and one additional site is scheduled for remediation by mid-2005. These projects have involved removal or capping of more than 230,000 cubic yards of contaminated sediment in San Diego Bay.

The RB has issued sixty regulatory orders to direct cleanup activities at the contaminated sediment sites, many of which have been contested. To date the total cost incurred by the various responsible parties for investigations and actual cleanup work is estimated to be in excess of $25,000,000.

Strategy for Contaminated Marine Sediment Cleanup:

a. Establish sediment cleanup levels for San Diego Bay shipyards by July 2005.

b. Continue progress towards delineating the extent of sediment contamination, establishing cleanup levels and directing cleanup and post-cleanup verification monitoring at other sites in San Diego Bay

c. Ensure that sediment dredging and dredge material disposal are managed in an environmentally sound manner.

d. Use RB authority to eliminate or reduce discharges of chemicals that accumulate to harmful levels in San Diego Bay sediments.

e. Provide stakeholders with the opportunity to participate in marine sediment cleanup in San Diego Bay.

5. NPDES "POINT SOURCE" REGULATION PROGRAM

The San Diego Region has 22 major National Pollutant Discharge Elimination System Permit (NPDES) dischargers (eleven wastewater treatment plants, four shipyards, four power plants, and three US Navy yards), 22 minor NPDES dischargers (one shipyard, ten boatyards, five dairies, two aquaria, and four miscellaneous dischargers), and approximately 80 general NPDES permit enrollees.

The NPDES Permit program requires the adoption of new and updated permits through a public hearing process. NPDES permits are in effect for a maximum of five years. For FY 2004/2005, 18 NPDES permits will expire and will need to be renewed. The RB staff conducts site inspections and regularly reviews the monitoring reports provided by each discharger.

NPDES permits regulate all of the region's treated sewage discharges to the ocean through seven ocean outfalls. A portion of the sewage flow from Mexico is treated at an international plant located on the U.S. side of the border and discharged to the Pacific Ocean through the South Bay Ocean Outfall. All Ocean discharges of treated sewage are monitored for effluent quality and impacts to the ocean. Each NPDES permit includes monitoring requirements for core monitoring, regional monitoring, and special studies. Sewage spills from sanitary sewer collection and treatment systems is a significant regulatory concern in the region.

The RB conducts oversight of pretreatment programs implemented by wastewater collection agencies. There is also increasing interest in diverting low-flow dry weather flows from storm water sewer systems into sanitary sewer systems. While feasible in the short-term, low-flow diversions provide limited benefit during high-flow wet weather conditions, when pollutants are conveyed to receiving waters without treatment.

In 2004, the SWRCB initiated an effort to review and evaluate the style and content of NPDES permits adopted by the individual RB. The purpose was to develop a standardized permit format to help reduce the cost of NPDES permit renewals, increase staff efficiency and provide consistency in permits.

The California Integrated Water Quality System (CIWQS) is a new computer system for the State and Regional Water Boards to track information about places of environmental interest, manage permits and other orders, track inspections, and manage violations and enforcement activities. CIWQS also includes an electronic Self Monitoring Report (eSMR) tool for submission of monitoring reports via an internet web site. CIWQS is part of an overall effort to integrate several disparate legacy systems, compile water quality data, standardize permits, automate processes, and to make data more accessible to Water Board staff, the public, and USEPA.

The NPDES permit for the *U.S. Navy, Naval Base Point Loma Complex, San Diego County* (*Order No. R9-2002-0002)* requires that industrial storm water discharges achieve a toxicity survival rate of *90% survival, 50% of the time and not less than 70% survival, 10% of the time*. The toxicity limitation becomes an enforceable effluent limitation in September 2006. Until then, the limitation is a performance goal. The Order also allows the U.S. Navy to conduct a toxicity study on industrial storm water dischargers and to recommend an alternative toxicity limitation based on the results of the study. Subsequent NPDES permits adopted for the other Naval Base Complexes in the San Diego Region (including *Naval Base Coronado* and *Naval Base San Diego*) also have an identical toxicity limitation for stormwater.

Strategy for the NPDES Program:

a. Adopt new and revise and renew existing NPDES permits in a timely manner.

b. Continue to focus on sewage spills and establish regulatory oversight to ensure that low flow diversions from storm drain systems to sewage systems comply with appropriate regulatory programs.

c. Coordinate with USEPA, SWRCB, and the regulated community to implement the CIWQS system.

6. WATER SUPPLY AND REUSE

Over 90% of water demand is met with imported water, mostly from the Colorado River. There are 10 major reservoirs, some of which are threatened by urban runoff pollution. Water supply for regional growth must be provided from imported sources or from local ground water and surface water supplies. Most urban development has been within the supply service area for imported water. However, some development such as new rural multi-family housing developments and commercial activities at several Indian reservations, rely solely on local water supplies. In some locations this will over-tax both the local surface water and ground water supply. In most locations however, shortages can be partially met with recycled water.

Water reuse in the region is slowly expanding. The discharge of reclaimed water is regulated with Waste Discharge Requirements or Master Reclamation Permits that are issued to the agency that produces and distributes the reclaimed water. The Regional Board has and will continue to use this approach.

The use of desalination to treat seawater for potable use will increase in the future. A five million gallon per day (MGD) pilot plant, located in Carlsbad, is the first desalination project. The pilot project produces up to 5 MGD of potable regional water and later will expand to up to 50 MGD. Brine disposal from the desalination process is a potential water quality concern. Various public agencies and private organizations are conducting feasibility studies to evaluate the potential to co-locate desalination facilities at the San Onofre Nuclear Generating Station and the South Bay Power Plant.

The desalination of salty groundwater is also being developed. Three projects are currently underway to treat groundwater brine: City of Oceanside in San Diego County and the San Juan and Irvine Ranch Desalter projects located in Orange County.

The use of large quantities of recycled water in the production of power has been proposed. The Palomar Energy facility within the City of Escondido is in the initial phase of construction and proposes to use recycled water from the City's Hale Avenue Resource Recovery Facility. Also, recycled water from San Diego's South Bay Water Reclamation Plant is being considered for use at a new power plant in the South Bay.

Strategy for Water Reuse:

a. Continue to support and regulate the use of reclaimed wastewater through adoption of waste discharge requirements.

b. Coordinate with project managers developing new desalination sites for purposes of water supply to ensure that the brine disposal impacts are properly regulated.

c. Continue involvement in the development of recycled water use at proposed power plants within the region.

7. GROUND WATER REGULATION

The San Diego Region does not contain extensive groundwater basins. Therefore, ground water is not currently a major source of public water supplies. Some basins, however, are significant local sources and function as "sole source" aquifers. Most of our groundwater basins are comprised of alluvial aquifers that underlie the larger rivers in the region. Other public water supplies are derived from fractured bedrock aquifers that exist in several inland areas such as Ramona, Santa Ysabel, and Julian.

Groundwater uses are impacted by toxic chemical discharges at commercial/industrial sites, military facilities, and leaks from above ground and underground fuel storage tanks. As a result of past spills, leaks and pollutant discharges to groundwater in the San Diego Region, 48 sites require continuing regulatory oversight. The Region has 64 federal

Superfund (CERCLA) sites at Camp Pendleton, one California Superfund site in Escondido, and 2 others cases that are considered significant due to extensive groundwater plumes. There are currently over 1,650 active tank sites in the region. In addition, the region has approximately 50 active and inactive landfill sites that pose a threat to groundwater from migration of leachate and/or contamination by landfill gas.

Strategy for Groundwater Protection:

a. Continue to prioritize and focus regulatory efforts on cleanup sites with significant groundwater pollution (*e.g.* Mission Valley Fuel Terminal, Former Ketema Aerospace Facility).

b. Continue to monitor/evaluate and prioritize cases where emergent chemicals (*e.g.* 1,4-Dioxane, Chromium $^{+6}$, Perchlorate) and fuel additives (*e.g.* MTBE) have been identified as contaminants of concern.

c. Review the municipal landfill project proposed at Gregory Canyon and require design and monitoring elements that minimize threats to groundwater resources in the San Luis Rey River Watershed.

d. Work to develop partnerships with water purveyors and local agencies dedicated to developing groundwater resources.

8. WATER QUALITY COMPLIANCE

The primary goal of enforcement is to correct violations as soon as possible and return the discharger to compliance. Swift and firm enforcement can protect the beneficial uses of receiving waters and prevent threatened pollution from occurring. Fair, firm and consistent enforcement also deters potential violators by creating a culture of compliance. The RB has the responsibility to acknowledge, report, and respond to all violations. Improving the enforcement process consists of identifying the highest priority cases for RB staff to work on and decreasing the time it takes to complete an enforcement action. All alleged violations are recorded and reported to the RB Members each quarter.

Assessment of administrative civil liability is an essential component of an effective enforcement program, which provides a measure of compensation for the damage that pollution causes to the environment and ensures that polluters do not gain an economic advantage from violations of water quality laws.

Enforcement priorities are based on the State Board Enforcement Policy, which establishes a specific set of priorities for enforcement actions for various types of violations. The State Legislature also has enacted laws requiring specific enforcement. For example, since January 2000, the California Water Code (CWC) contains provisions establishing mandatory minimum penalties (MMPs) for violations of effluent limitations contained in NPDES permits (CWC 13385) and certain violations of storm water regulations (CWC 13399.33). More recent modifications to the WC now require MMPs

for dischargers that submit late monitoring reports. The RB is required to take timely actions.

Since the recent increase in reliance on fee payment by the SWRCB and all RBs, a significant challenge exists to keep pace with enforcement actions that respond to non-payment of fees by all dischargers. This concern will remain an important enforcement issue.

The RB is limited in its ability to take some types of enforcement action against the federal government because of principles of sovereign immunity.

Strategy for Enforcement:

a. Continue to prioritize enforcement. The most egregious and environmentally damaging violations are the highest priority as follows:

   - Sewage spills.
   - Illegal and unauthorized fills of waters of the state.
   - Violations of existing enforcement orders.
   - Unregulated storm water and sediment discharges.

b. Continue to assess civil liability for effluent limitation violations that are subject to mandatory minimum penalties.

c. Improve oversight to reduce the rate of delinquency in payment of annual fees.

9. WATER QUALITY MONITORING

The RB programs include a monitoring to document water quality conditions, assess trends, identify specific problems, measure the effectiveness and successes of our programs, and educate the public on the water quality impacts of human activities. Complete water quality assessments are also critical for directing the resources and efforts to the most significant problems. However, data from the traditional monitoring programs are inadequate to perform many of these functions because it does not produce data about receiving waters beyond the immediate area influenced by a regulated discharge.

Funding and organizing existing resources to conduct a robust Water Quality Assessment Program is now one of the top priorities of the RB. Collecting ambient monitoring data and making it available to the public is a key component of this program. Ambient monitoring provides information about the status of the physical, chemical, and biological characteristics of the environment is collected to answer specific questions about the status and trends for those characteristics. Ambient monitoring may be independent of our regulatory water quality programs and serves as a measure of (1) the overall quality of water resources and (2) the overall effectiveness of Regional Boards' prevention, regulatory, and remedial actions.

Two critical ambient monitoring efforts by the RB are currently underway—the Surface Water Ambient Monitoring Program (SWAMP) and the Regional Harbor Monitoring Program. SWAMP, administered by the State Board, provides limited funds to the RB to conduct ambient monitoring in each of the region's 11 watersheds once every five years. The SWAMP data will be available to the public, and may eventually capture monitoring data collected under all State and RB programs. Consequently, these programs are being adjusted so that their data are comparable to the data collected under SWAMP.

The Regional Harbor Monitoring Program is being developed to obtain critical ambient water quality data from the four harbors in the San Diego Region. The Regional Board has directed the appropriate harbor authorities to initiate this program, and will oversee its implementation. Initial studies will be focused on the ambient concentration of copper in San Diego Bay.

Strategy for monitoring:

a. Develop a regional comprehensive water quality monitoring plan.

b Expand and coordinate SWAMP resources with other monitoring efforts.

c. Complete the development of the Regional Harbor Monitoring Program.

d. Build a database of ambient water quality data from existing sources of data.

e. Obtain funding to support ambient water quality monitoring.

Glossary of Abbreviations and Terms

BMP	Best Management Practices
CALEPA	California Environmental Protection Agency
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CEQA	California Environmental Quality Act
CWA	Clean Water Act
CWC	California Water Code
CIWQS	California Integrated Water Quality System
FY	Fiscal Year
GAMA	Groundwater Ambient Monitoring and Assessment
GEOWBS	Geographic Water Body System
GIS	Geographic Information System
IWTP	International Wastewater Treatment Plant
MCAS	Marine Corps Air Station
MGD	Million Gallons per Day
MMP	Mandatory Minimum Penalty
MS4	Municipal Separate Storm Sewer System
MTBE	Methyl Tertiary Butyl Ether
NPDES	National Pollutant Discharge Elimination System
NPS	Non Point Sources
PC	Personal Computer
RB	Regional Board
SWAMP	Surface Water Ambient Monitoring Program
SWIM	System for Water Information Management
SWRCB	State Water Resources Control Board
TMDL	Total Maximum Daily Load